

106077-EE998660

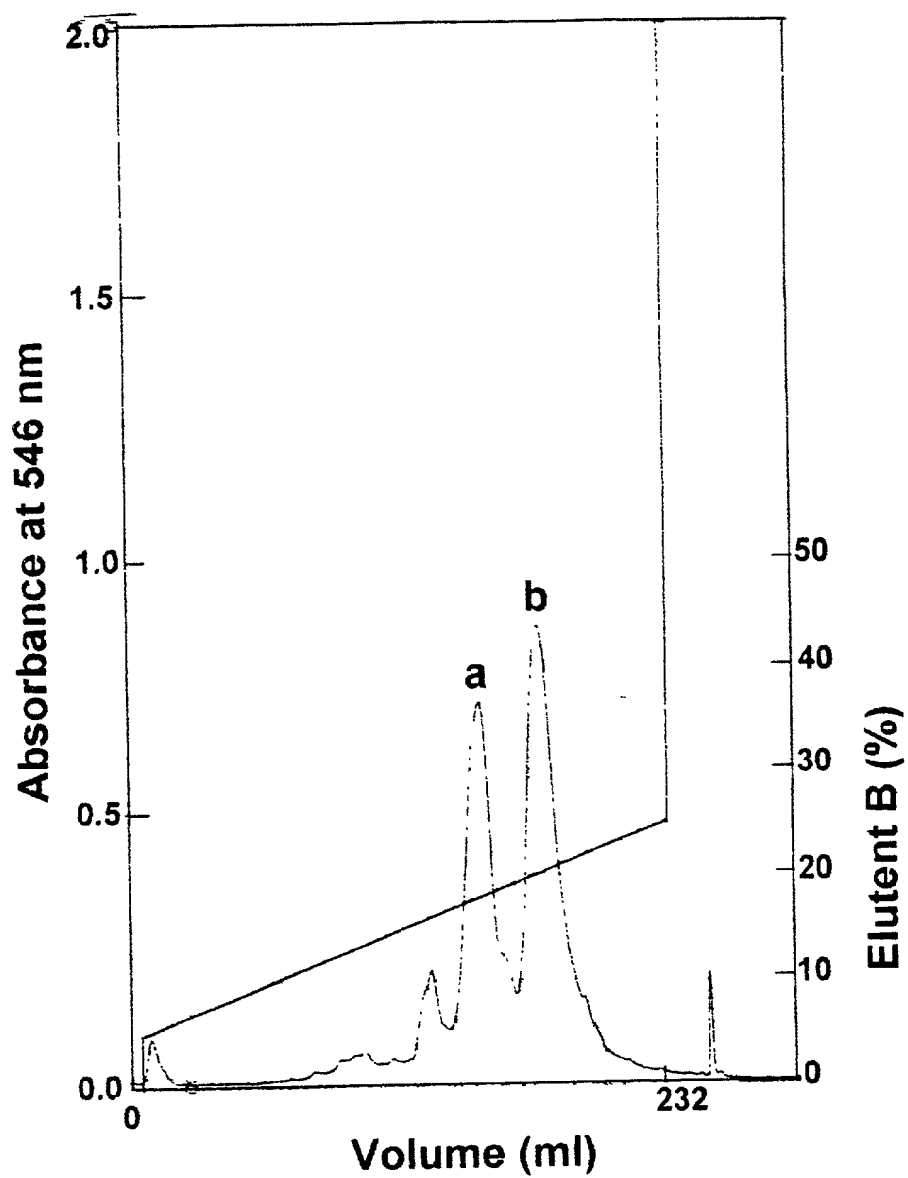


FIG. 2A

106011-EE998660

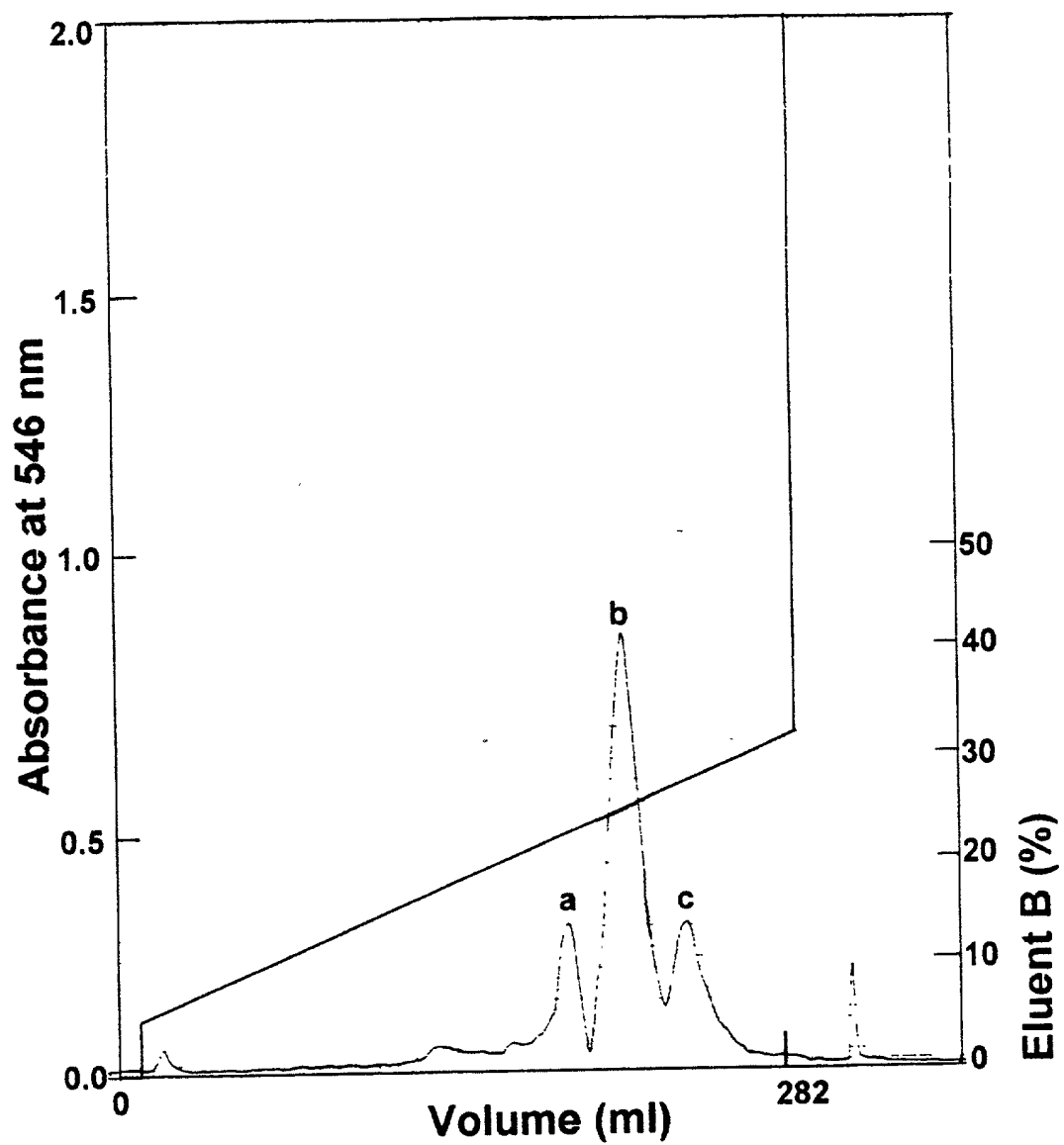


FIG. 2B

FIG. 3A

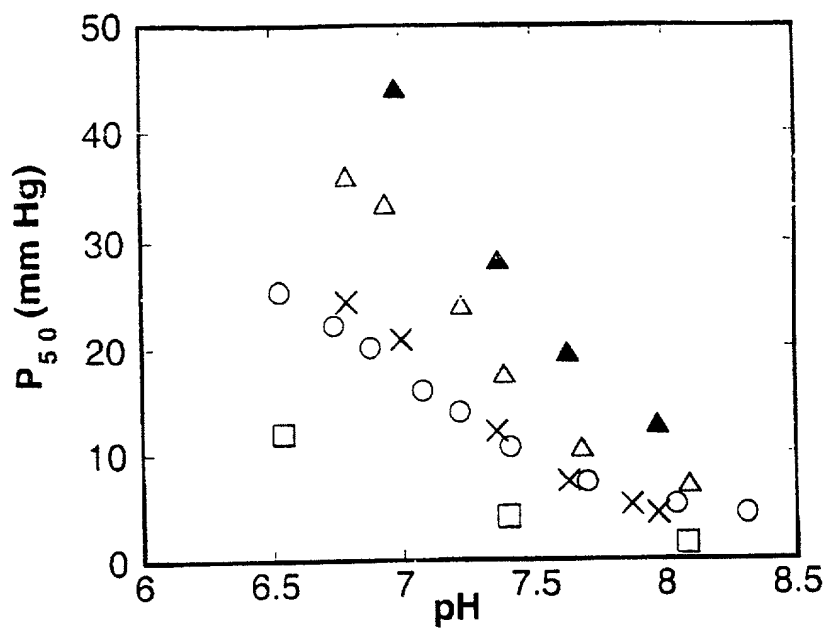
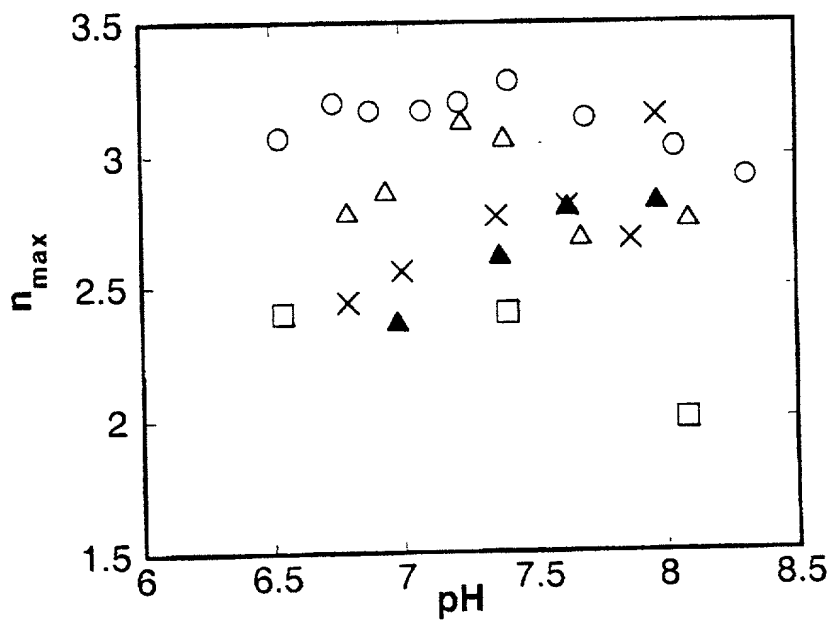


FIG. 3B



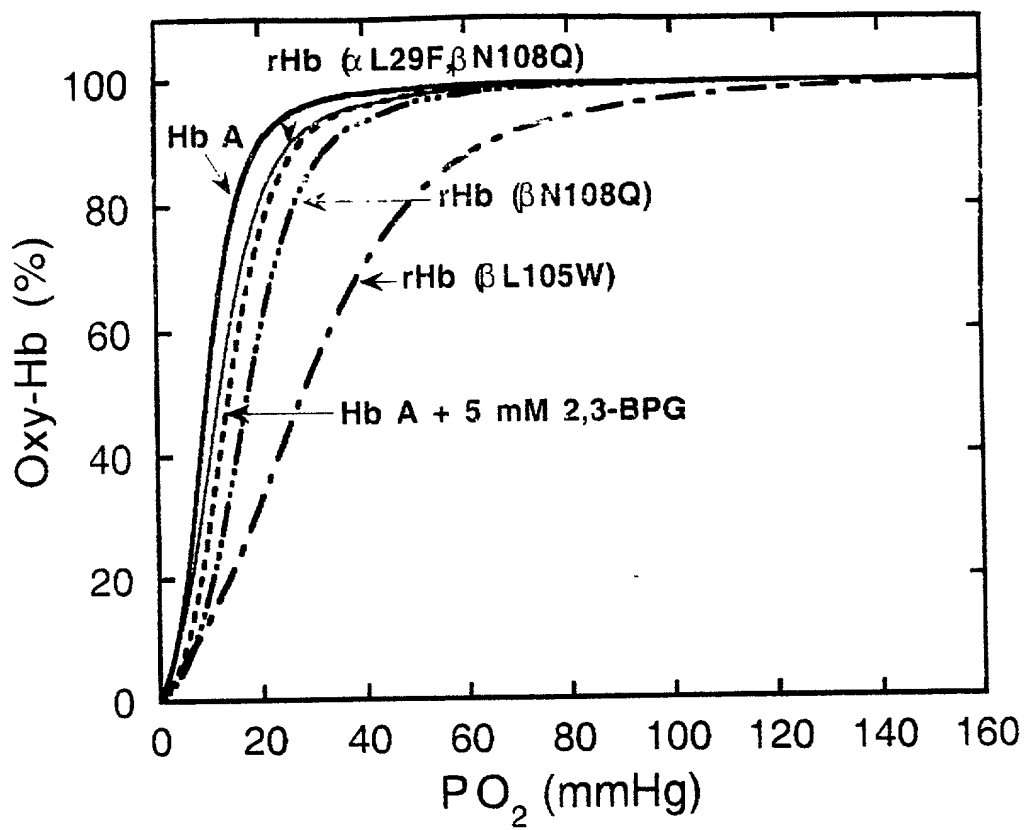


FIG. 4

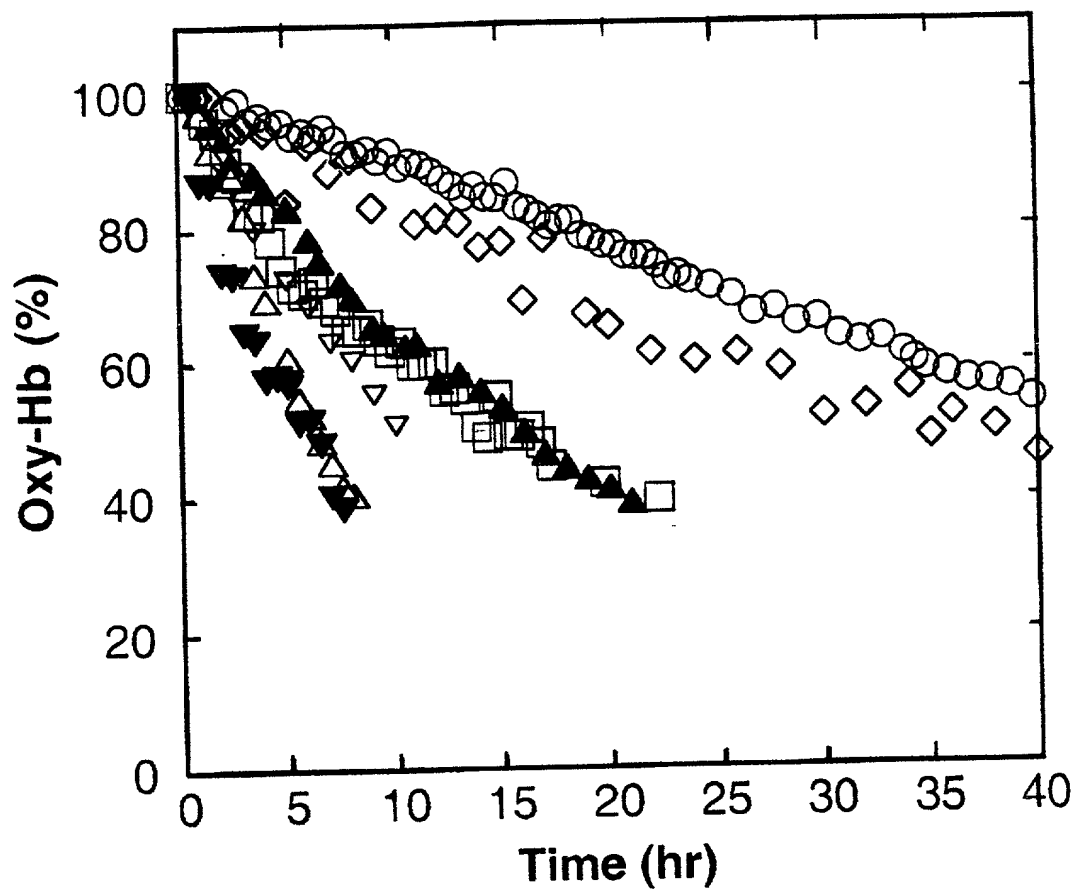


FIG. 5

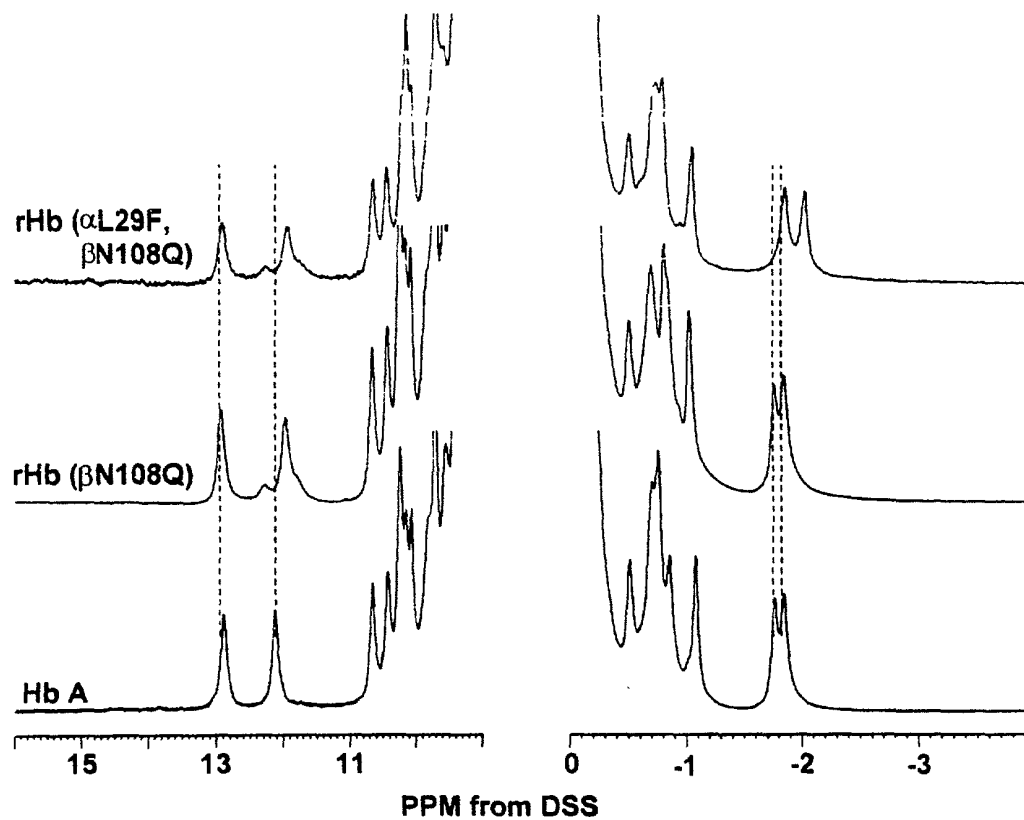


FIG. 6A

FIG. 6B

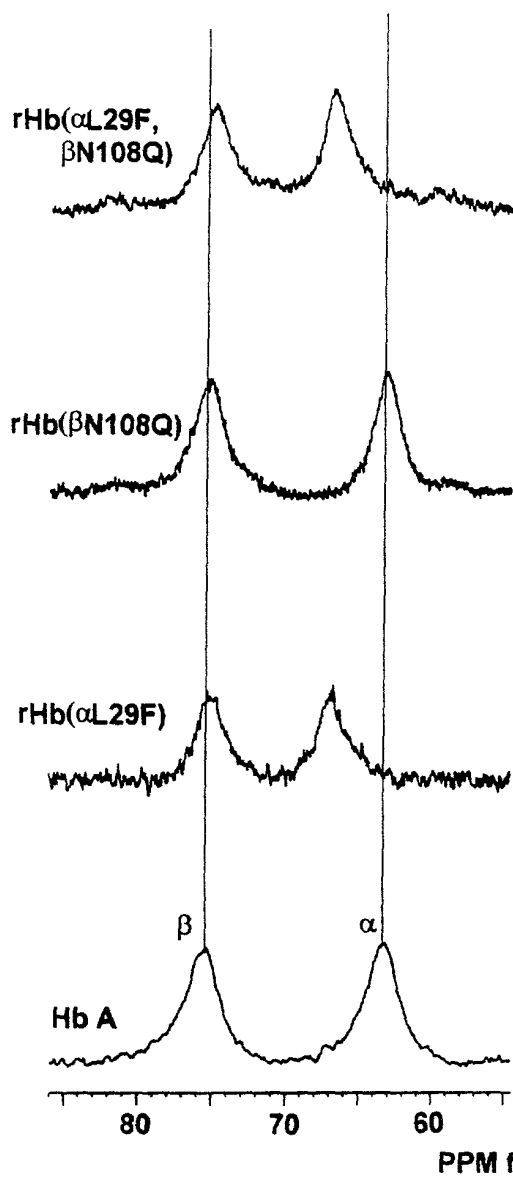


FIG. 7A

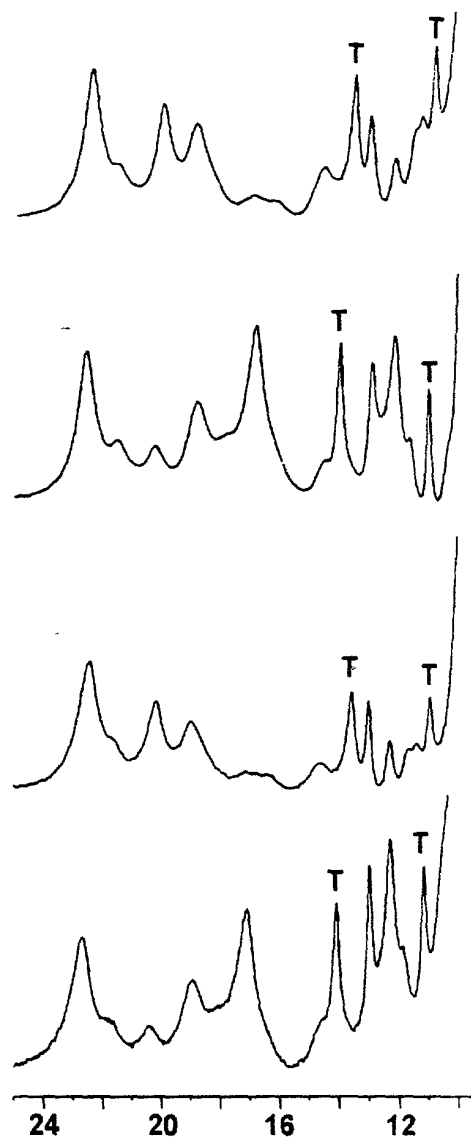


FIG. 7B

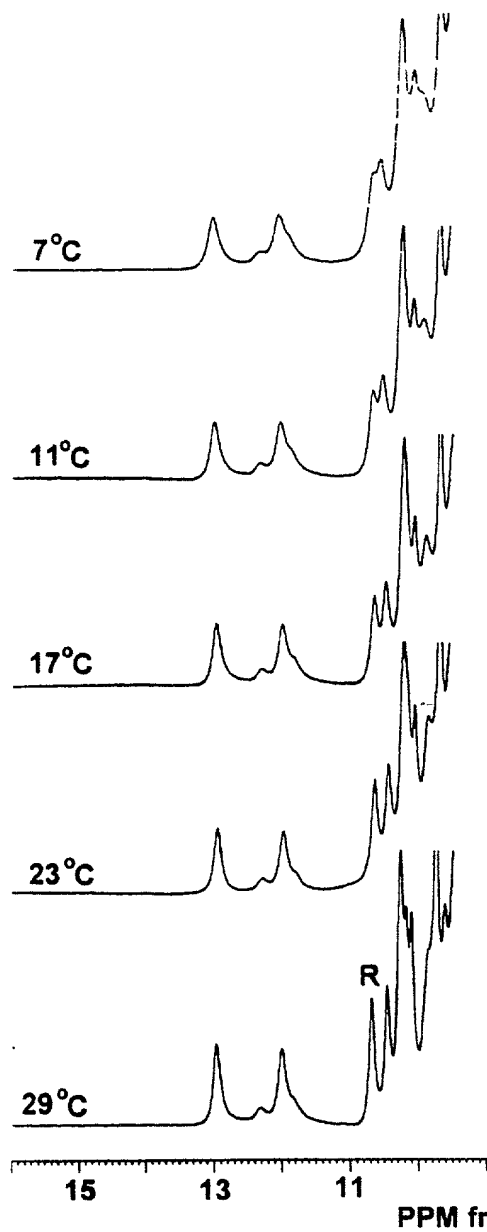


FIG. 8A

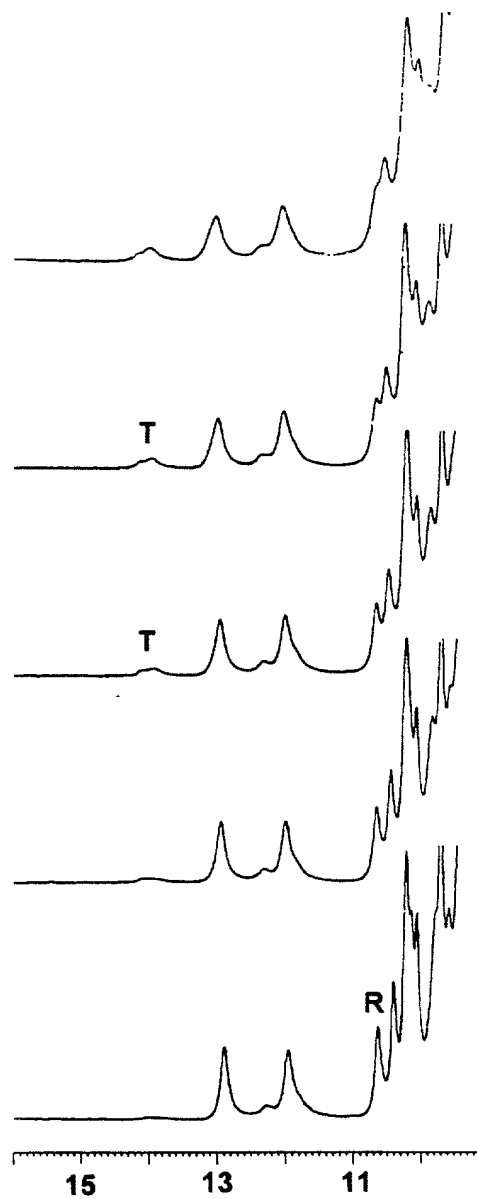


FIG. 8B



105077-66998660

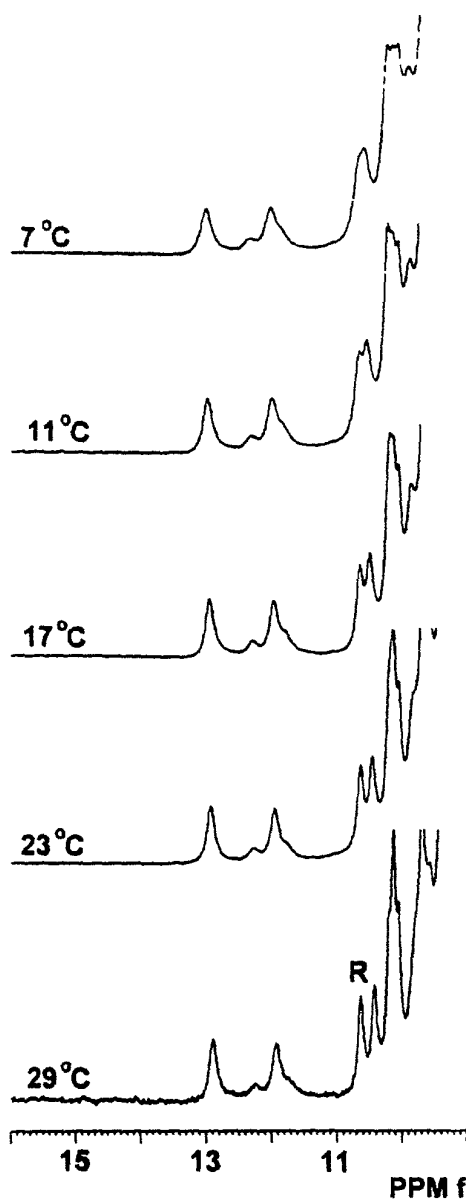


FIG. 9A

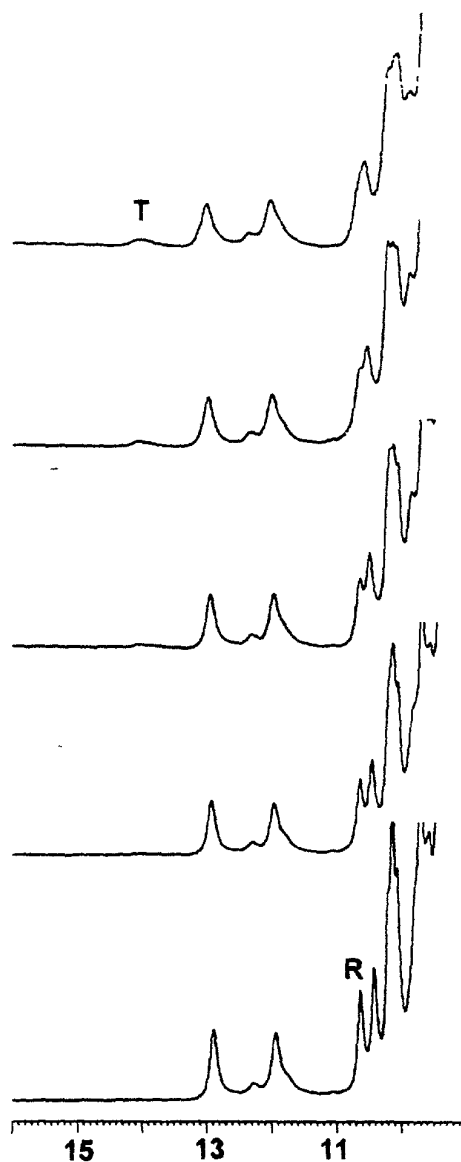


FIG. 9B

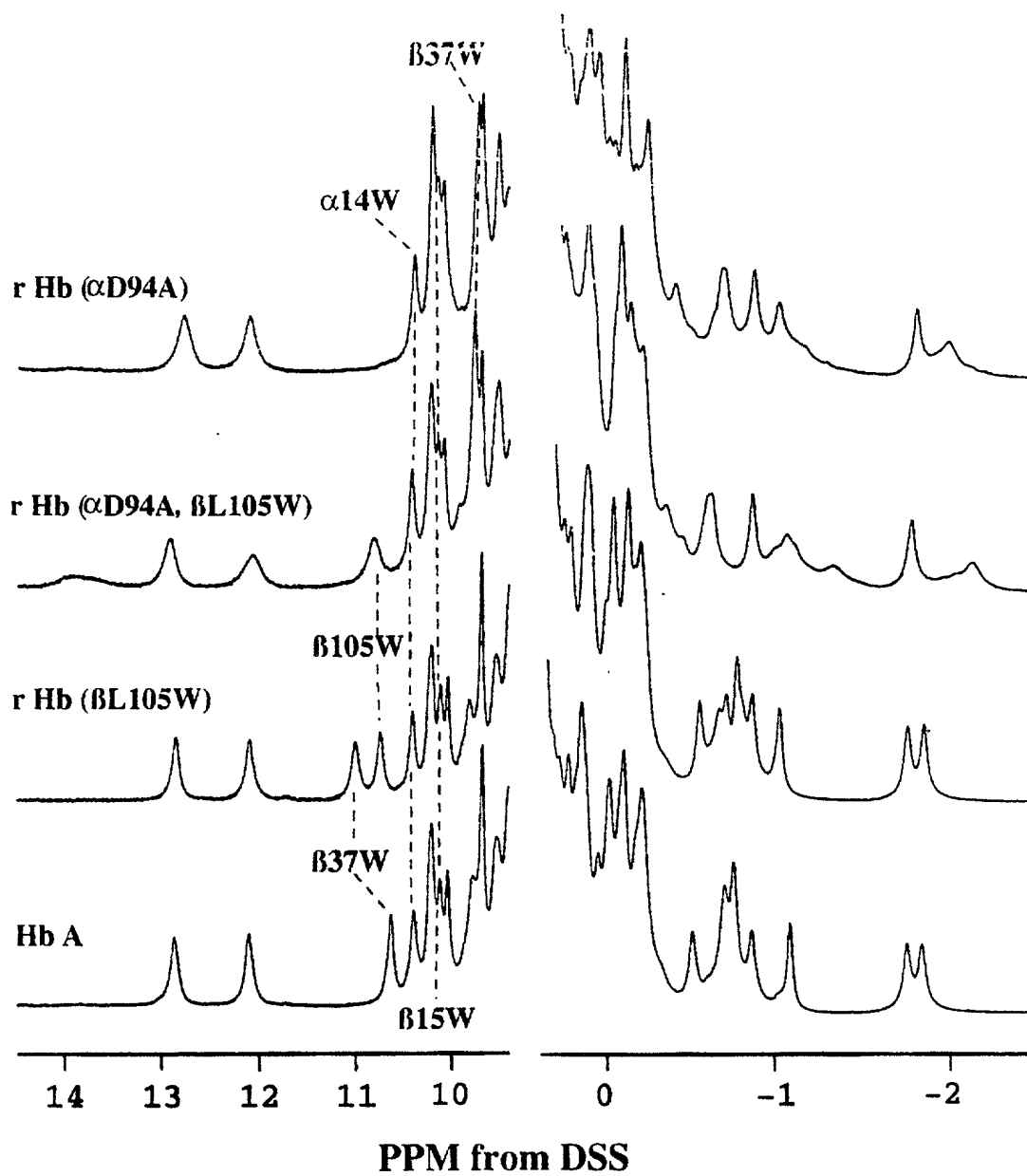


FIG. 10A

FIG. 10B

FIG. 11A

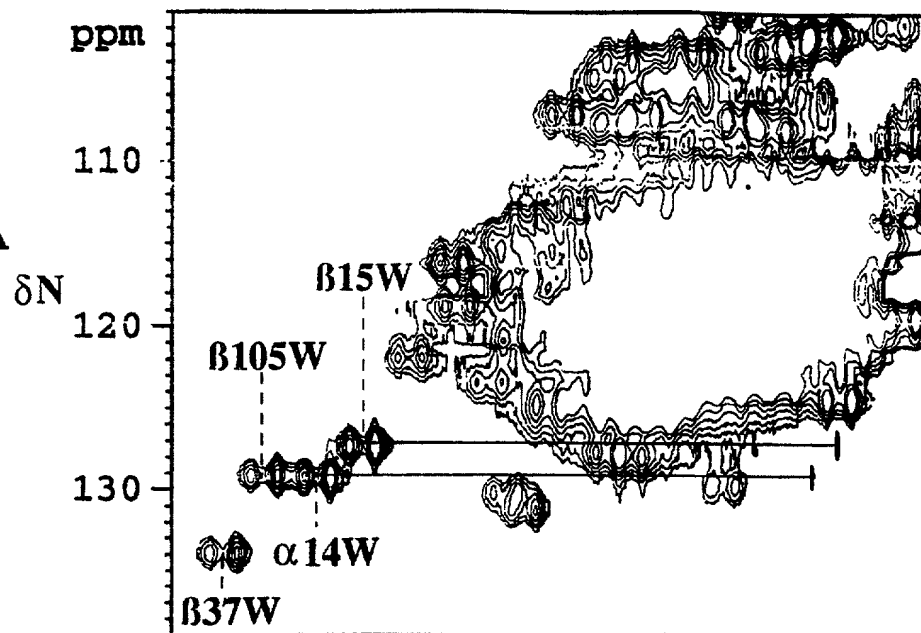


FIG. 11B

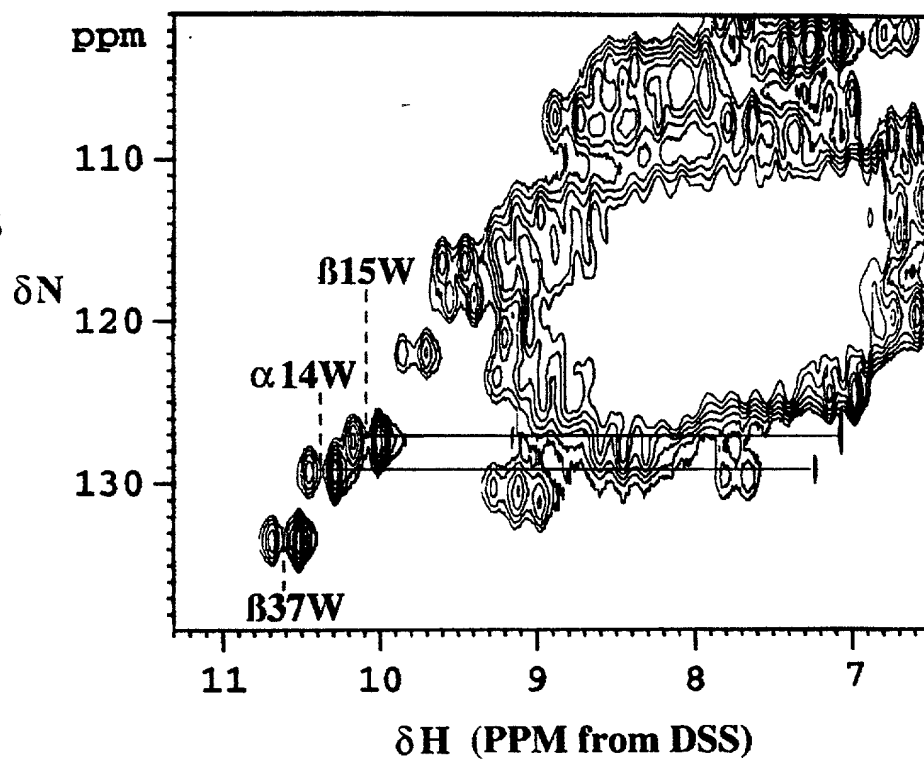


FIG. 12A

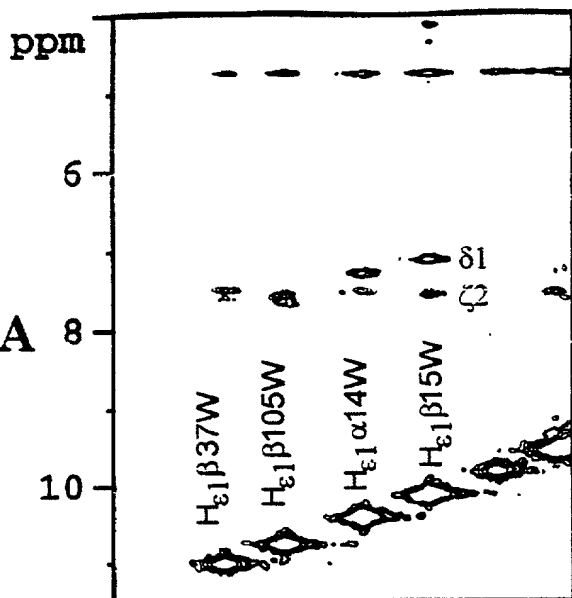


FIG. 12B

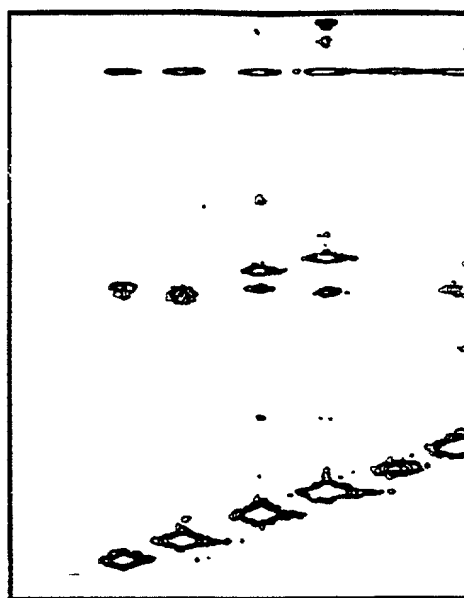


FIG. 12C

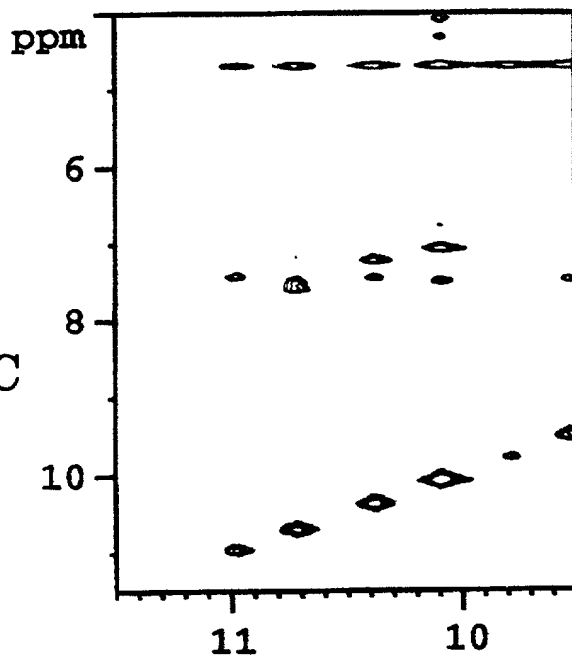
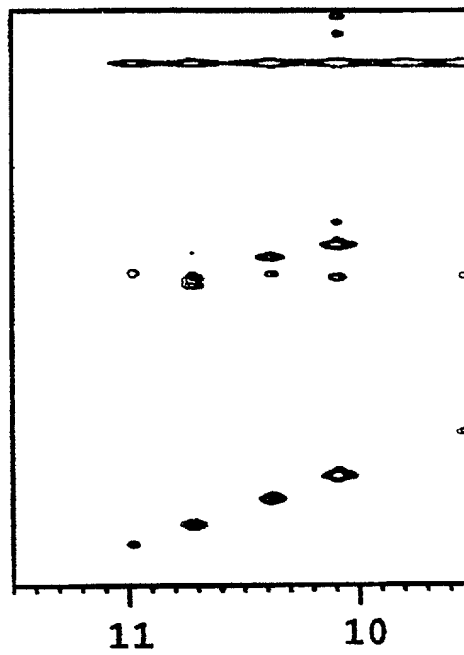


FIG. 12D



PPM from DSS

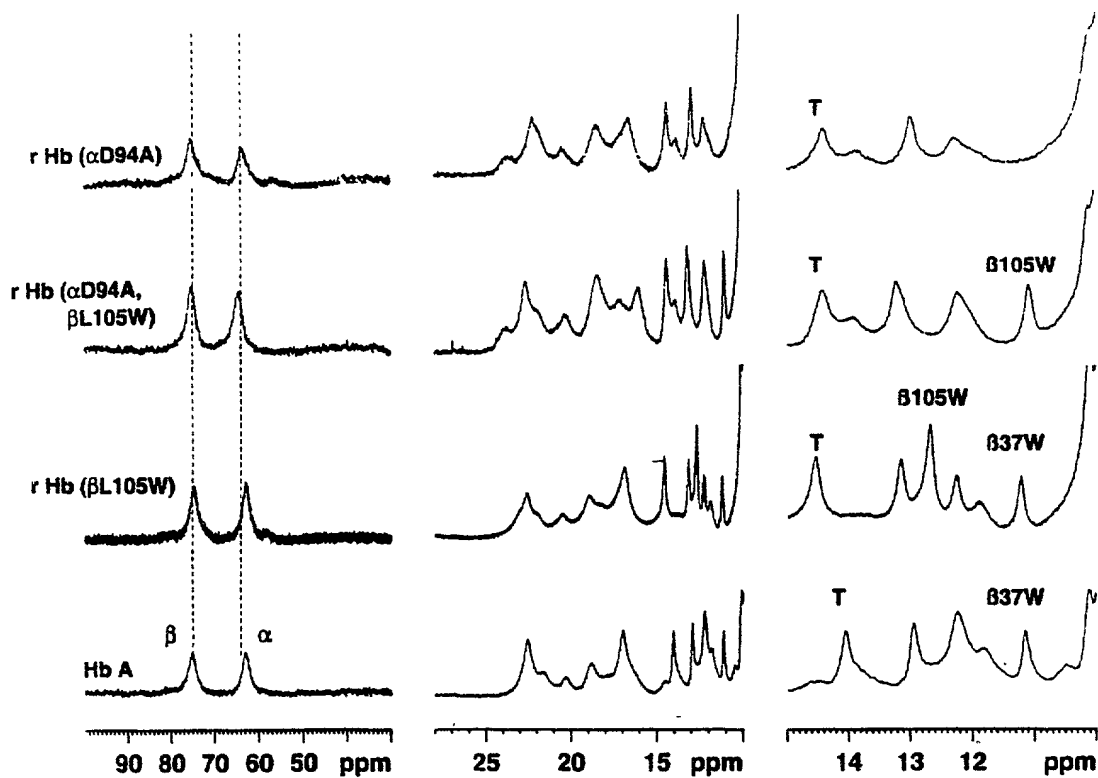


FIG. 13A

FIG. 13B

FIG. 13C

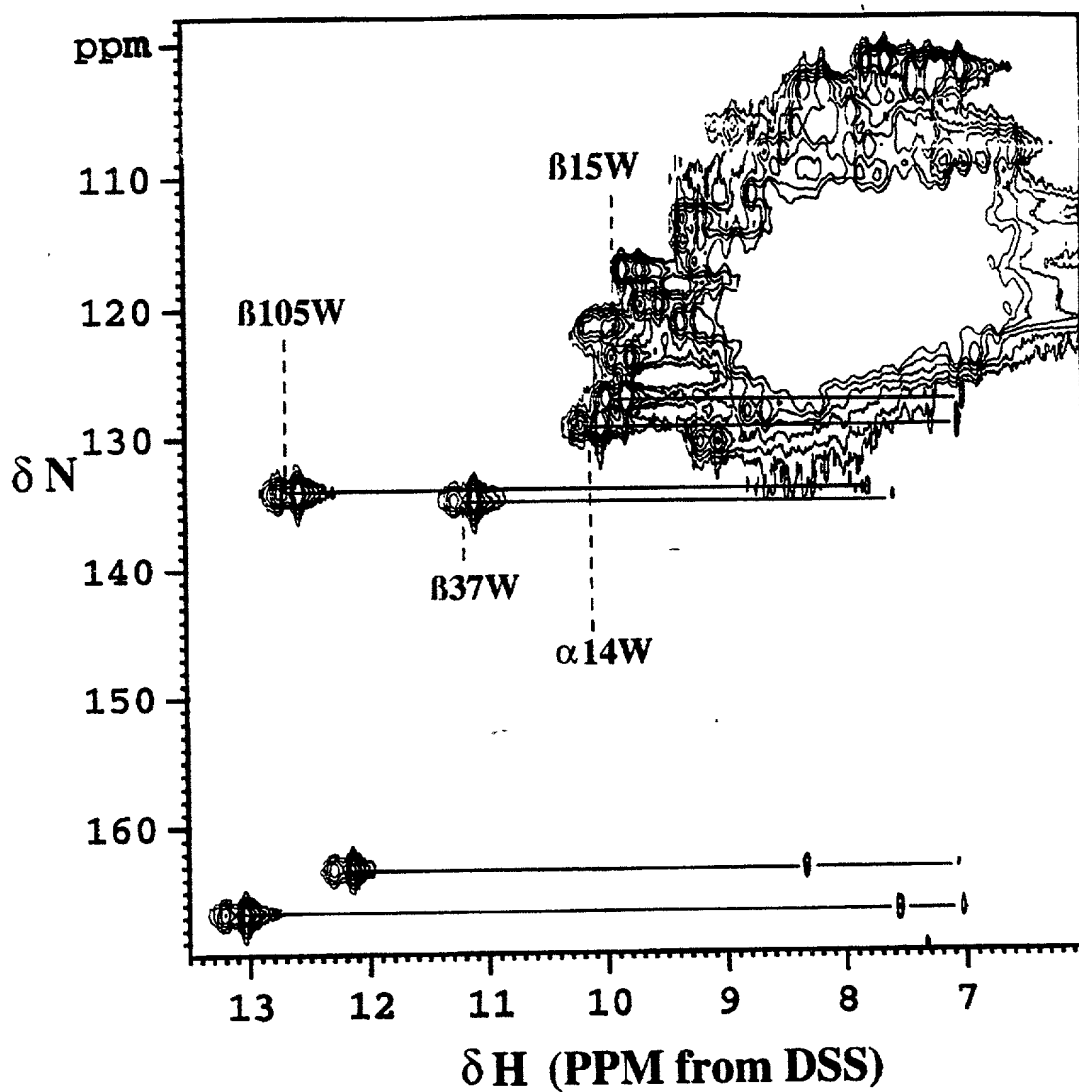


FIG. 14

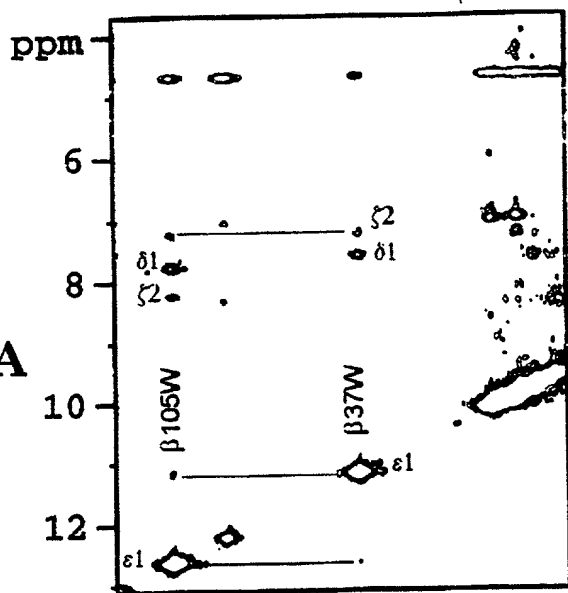


FIG. 15A

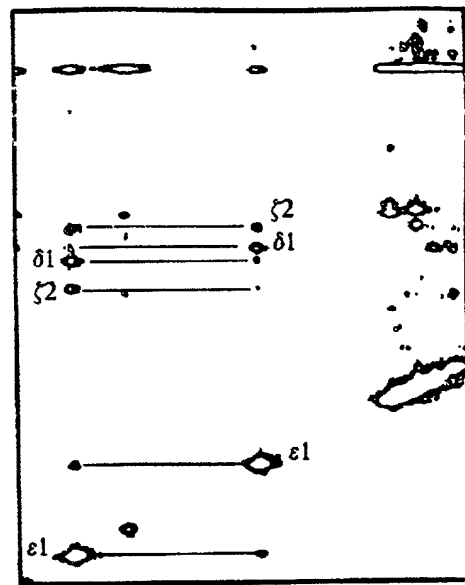


FIG. 15B

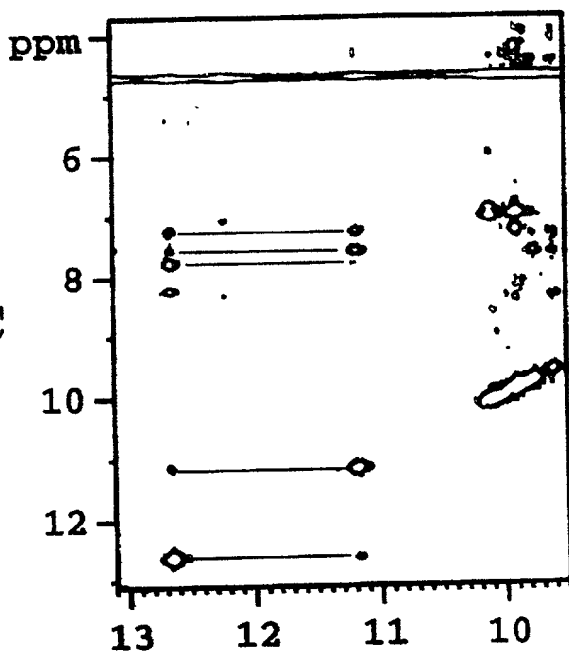


FIG. 15C

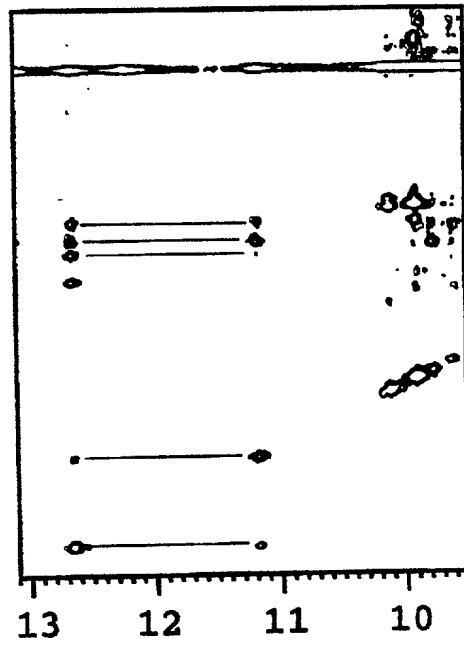


FIG. 15D

PPM from DSS

FIG. 16 A

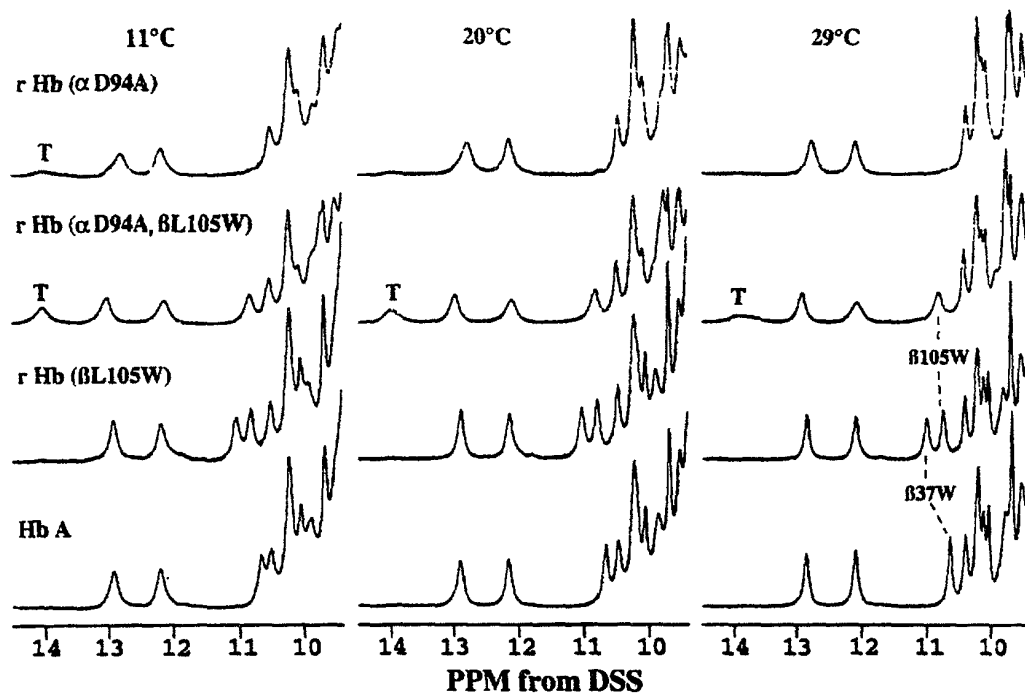


FIG. 16B

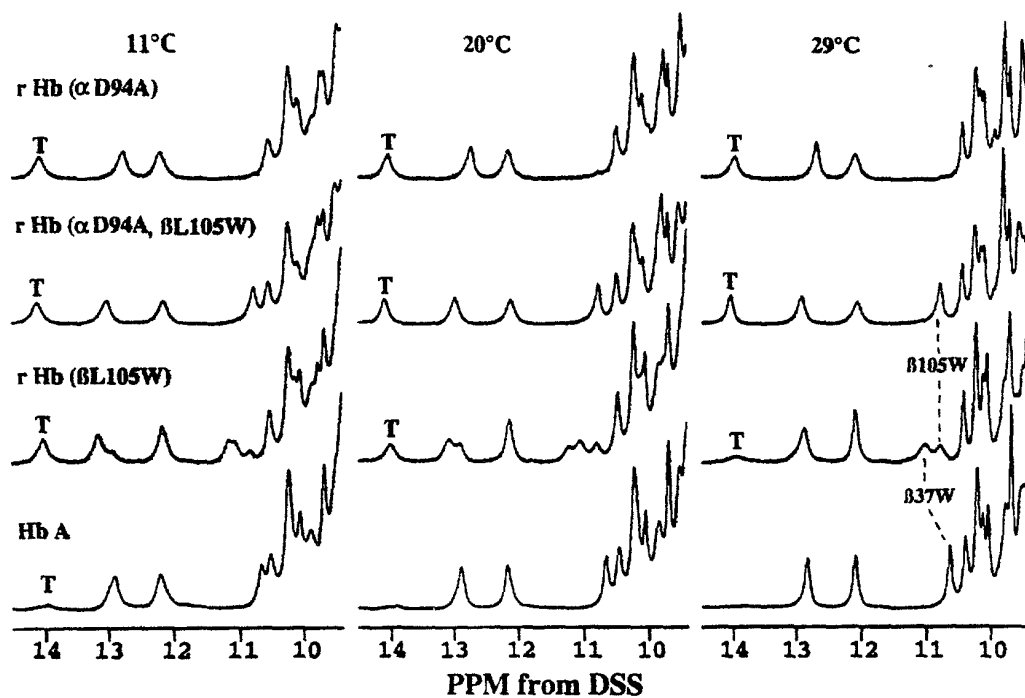




FIG. 17A

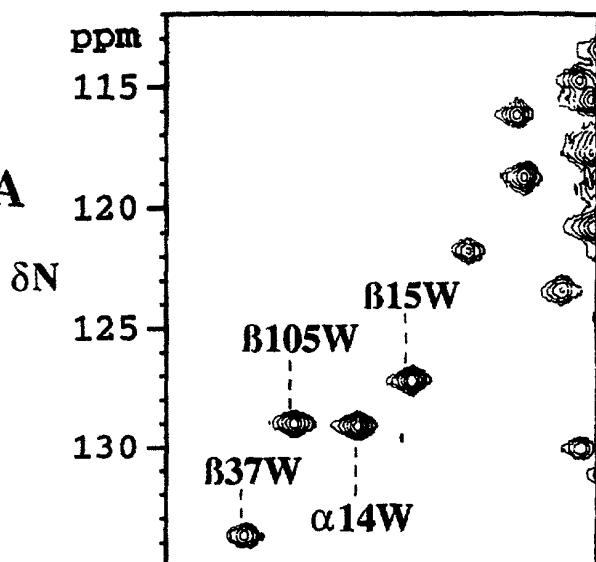


FIG. 17B

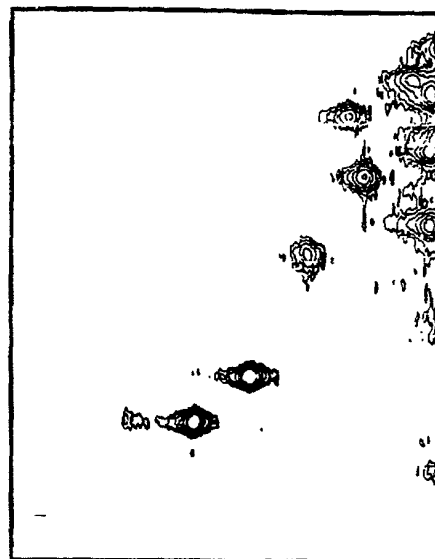


FIG. 17C

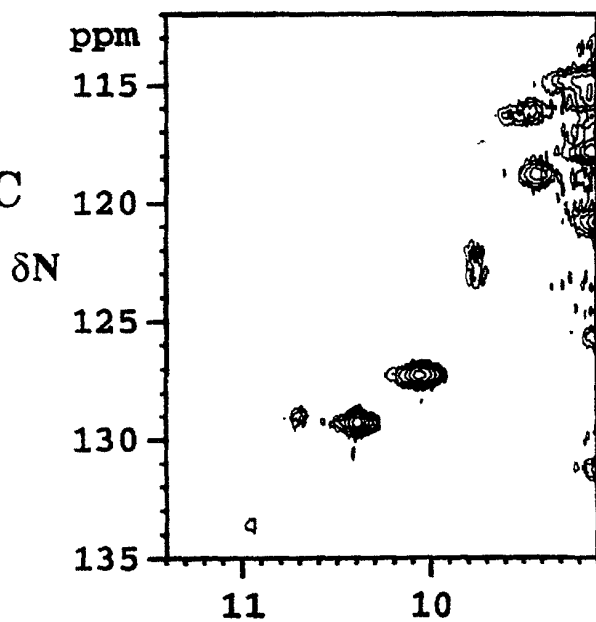
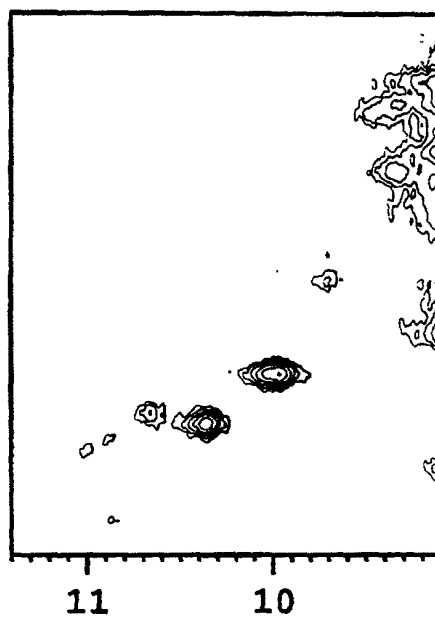


FIG 17D



$\delta H$  (PPM from DSS)

FIG. 18A

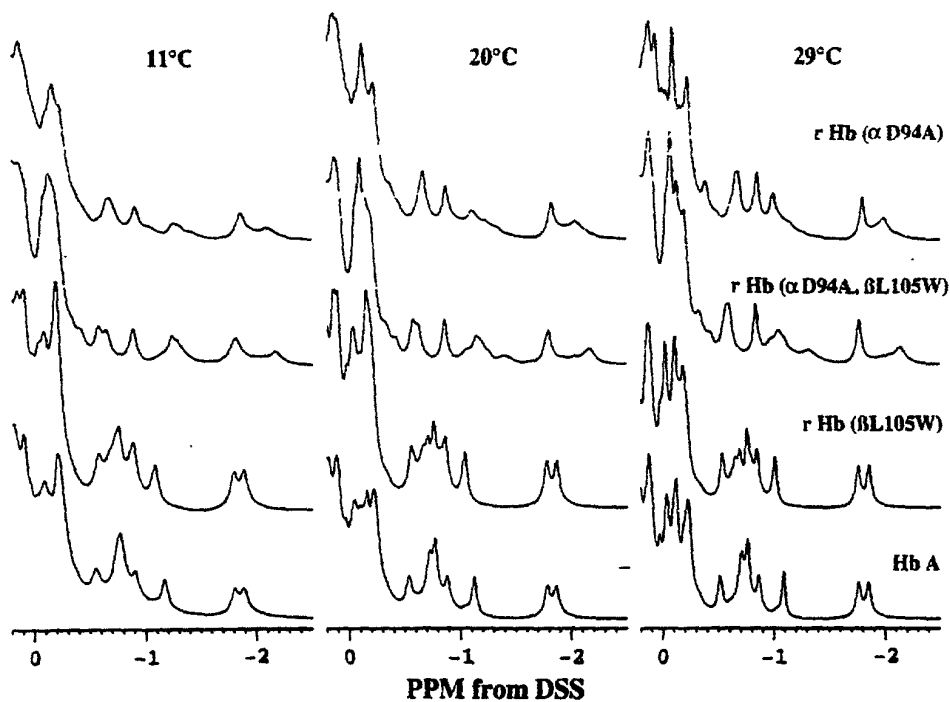
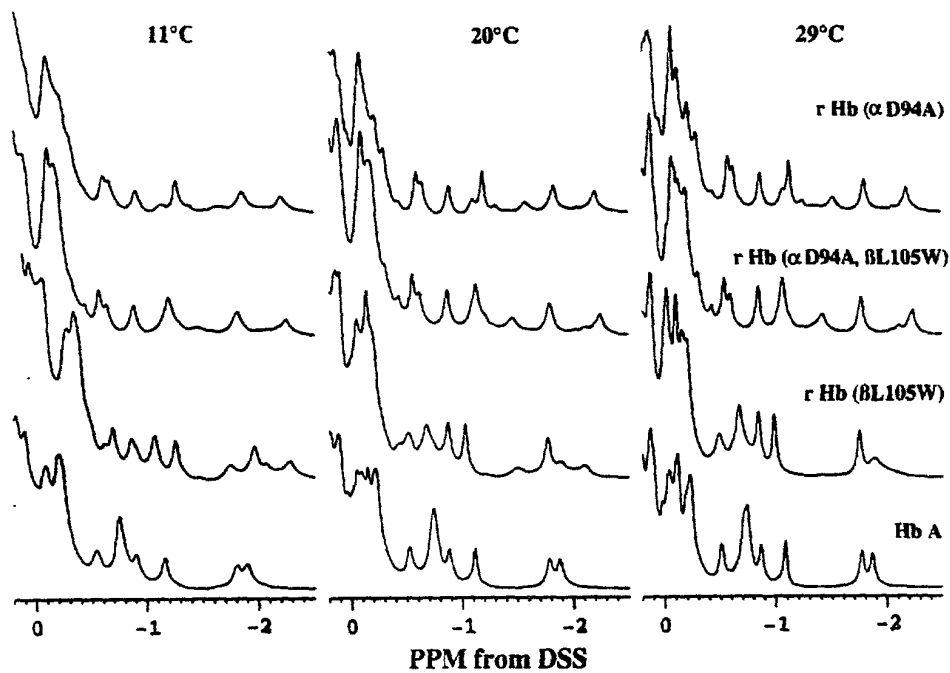


FIG. 18B



**COMBINED DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **LOW OXYGEN AFFINITY MUTANT HEMOGLOBINS**, the specification of which

## Regular Application

☐ is attached hereto.

☒ was filed on June 21, 2000 as Application Serial No. 09/598,218.

## PCT Application Entering National Phase

☐ was filed on [Date] as PCT International Application No. [App. No.] and was amended on [Date of Amendment] (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

<u>Prior Foreign Application(s)</u>			<u>Priority Claimed</u>
(Number)	(Country)	(Day/Month/Year Filed)	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

(Application Number)	(Filing Date)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.)	(Filing Date)	(Status-patented, pending, abandoned)

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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1301 K Street, N.W.  
Suite 1100-East Tower  
Washington, DC 20005-3317

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Citizenship

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Date: July 12, 2000

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Citizenship

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5615 Forbes Avenue, Pittsburgh, PA 15217 USA

Date: July 12, 2000

REED SMITH SHAW & MCCLAY LLP

1301 K Street, N.W., Suite 1100-East Tower

Washington, DC 20005-3317

Ph: 202-414-9200

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Chien Ho, et. al.

Serial No.: 09/598,218

Filed: June 21, 2000

**LOW OXYGEN AFFINITY MUTANT  
HEMOGLOBINS**

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) and 1.27(d)) - NONPROFIT ORGANIZATION**

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

NAME OF ORGANIZATION: Carnegie Mellon University

ADDRESS OF ORGANIZATION: 5000 Forbes Avenue, Warner Hall, 4th Floor, Pittsburgh, PA 15213

- ☒ UNIVERSITY OR OTHER INSTITUTION OF HIGHER EDUCATION
- ☐ TAX EXEMPT UNDER INTERNAL REVENUE SERVICE CODE (26 USC 501(a) and 501(c)(3))
- ☐ NONPROFIT SCIENTIFIC OR EDUCATIONAL UNDER STATUTE OF  
STATE OF THE UNITED STATES OF AMERICA  
(NAME OF STATE: [State])  
(CITATION OF STATUTE: [Cite])
- ☐ WOULD QUALIFY AS TAX EXEMPT UNDER INTERNAL REVENUE SERVICE CODE  
(26 USC 501(a) and 501(c)(3)) IF LOCATED IN THE UNITED STATES OF AMERICA
- ☐ WOULD QUALIFY AS NONPROFIT SCIENTIFIC OR EDUCATIONAL UNDER STATUTE  
OF STATE OF THE UNITED STATES OF AMERICA IF LOCATED IN THE UNITED  
STATES OF AMERICA  
(NAME OF STATE: [State])  
(CITATION OF STATUTE: [Cite])

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code with regard to the invention entitled **LOW OXYGEN AFFINITY MUTANT HEMOGLOBINS** by inventors Chien Ho, Ching-Hsuan Tsai, Tsuei-Yun Fang and Tong-Jian Shen described in

- ☐ the specification filed herewith  
☒ Application Serial No. 09/598,218, filed June 21, 2000.  
☐ Patent No. [No.], issued [Date].

I hereby declare that the rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

*\*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities (37 CFR 1.27)*

NAME:

ADDRESS:

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

NAME:

ADDRESS:

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

NAME:

ADDRESS:

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

[illegible]

**SIGNATURE**

DATE \_\_\_\_\_